

I CLAIM:

1 1. Apparatus for injecting ozone into a tank of water, said apparatus comprising in

2 combination:

3 a) a filter for filtering the water drawn from said tank;

4 b) a venturi for entraining ozone in the filtered water flowing to the tank;

5 c) a circulation pump for drawing water through said filter and returning the water

6 to said tank through said venturi to entrain ozone in the returning water;

7 d) an ozone generator for generating the ozone;

8 e) a conduit interconnecting said ozone generator and said venturi to convey

9 ozone to said venturi from said ozone generator;

10 f) a suction line adapted to provide air to said ozone generator; and

11 g) a check valve disposed in said suction line to prevent airflow from said ozone

12 generator through said check valve.

1 2. An apparatus as set forth in Claim 1 wherein said venturi includes an inlet in fluid

2 communication with said conduit.

1 3. An apparatus as set forth in Claim 1 including a valve for metering airflow into

2 said ozone generator.

1 4. An apparatus as set forth in Claim 3 wherein said valve is upstream of said check

2 valve.

1 5. An apparatus as set forth in Claim 1 including a filter for filtering the air flowing
2 into said ozone generator.

1 6. An apparatus as set forth in Claim 5 wherein said filter is upstream of said check
2 valve.

1 7. A method for injecting ozone into a tank of water, said method comprising the
2 steps of:
3 a) filtering the water from the tank with a filter;
4 b) drawing the water through the filter and discharging the water into the tank
5 through a device for entraining the ozone;
6 c) generating ozone with an ozone generator and conveying the ozone to the
7 entraining device;
8 d) entraining the ozone conveyed in the water flowing into the tank;
9 e) further drawing air into the ozone generator through a suction line; and
10 f) precluding outflow of air from the suction line to restrain flow of water from
11 the venturi to the ozone generator.

1 8. The method as set forth in Claim 7 including the step of controlling the rate of
2 flow of air into the ozone generator.

1 9. The method as set forth in Claim 7 including the step of filtering the flow of air to
2 the ozone generator.

1 10. The method as set forth in Claim 8 including the step of filtering the flow of air to
2 the ozone generator.

1 11. A method for preventing a flow of water from a tank to an ozone generator having
2 a suction line for inflow of air and adapted to provide ozone for entrainment in water flowing
3 into the tank, said method comprising the steps of:
4 a) conveying ozone through a conduit from the ozone generator;
5 b) entraining ozone from the conduit in the water flowing to the tank; and
6 c) preventing flow of air and ozone from the ozone generator through the suction
7 line with a check valve disposed in the suction line.

1 12. The method as set forth in Claim 11 including the step of controlling the rate of
2 air flow into the ozone generator.

1 13. The method as set forth in Claim 11 including the step of filtering the air flow to
2 the ozone generator.

1 14. The method as set forth in Claim 12 including the step of filtering the air flow to
2 the ozone generator.

1 15. Apparatus for preventing a flow of water from a tank to an ozone generator
2 adapted to provide ozone for entrainment in water flowing into the tank, said apparatus
3 comprising in combination:
4 a) said ozone generator;
5 b) a device for entraining the ozone from said ozone generator in the water
6 flowing into the tank;
7 c) a conduit for conveying ozone from said ozone generator to said device;
8 d) a suction line for providing air to said ozone generator; and
9 e) a check valve disposed in said suction line for establishing a pressurized
10 environment in said conduit to prevent a flow of water therein to said ozone generator.

1 16. An apparatus as set forth in Claim 15 including a valve for regulating the rate of
2 flow of air into said suction line.

1 17. An apparatus as set forth in Claim 15 including a filter for filtering the air flowing
2 into said suction line.

1 18. An apparatus as set forth in Claim 16 including a filter for filtering the air flowing
2 into said suction line.

1 19. An apparatus as set forth in Claim 15 wherein said device is a venturi.

1 20. An apparatus as set forth in Claim 19 wherein said conduit includes a loop
2 disposed above the level of the water in the tank.